UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
BLAIR, DOUGLAS B

ART UNIT	PAPER NUMBER
2142	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	09/476,613	DIAMANT ET AL.
	Examiner	**Art Unit**
	Douglas B Blair	2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 July 2003* .

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

     If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____ .

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

     a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5) ☐ Notice of Informal Patent Application (PTO-152)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .   6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1.   Claims 1-26 are currently pending in the application.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
subject matter which the applicant regards as his invention.

3.   Claims 22 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

4.   Claim 22 recites the limitation "the first data" in the first limitation of the claim. There is

insufficient antecedent basis for this limitation in the claim.

5.   Claim 22 recites the limitation "the data configuration" in the third limitation of the

claim. There is insufficient antecedent basis for this limitation in the claim.

6.   Claim 22 recites the limitation "the protocol" in the fourth limitation of the claim. There

is insufficient antecedent basis for this limitation in the claim.

7.   Claim 24 recites the limitation "said processing" in the second limitation of the claim.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9.   Claims 1-2 and 20-21 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent Number 6,324,583 to Stevens.

10.   As to claim 1, Stevens teaches a method utilizing multiple network interfaces (col. 3,

lines 15-52), comprising: receiving a first network data to be transmitted by a first network

interface according to a protocol (col. 3, lines 15-52, Data is received at adapter 205 in Figure 2);

determining whether the first network interface supports the protocol (col. 5, lines 9-32, The

filter object determines what protocol is being used.); if the protocol is not supported, then

providing said first network data to a second network interface for processing of said first

network data into a second network data according to the protocol (col. 5, lines 33-67 and col. 6,

lines 1-23, The stack associated with adapter 210, in Figure 2, processes the communication

from adapter 205); and transmitting said network data with said first network interface (col. 6,

lines 24-63, The stack associated with adapter 205 sends data.).

11.   As to claim 2, Stevens teaches the method of claim 1, wherein the first network interface

does not support the protocol, the method further comprising: presenting the first and second

network interfaces to a protocol stack as being a homogeneous team of network interfaces (col.

3, lines 15-52).

12.   As to claim 20, Stevens teaches in a computing device, a network interface team (col. 3,

lines 15-52), comprising: a first network interface lacking support for a protocol (col. 3, lines 15-

52, Adapter 205 does not support TCP/IP.); and a second network interface supporting the

protocol (col. 3, lines 15-52, Adapter 210 does support TCP/IP), said second network interface

configured to process network data for the first network interface if said network data is to be

transmitted according to the protocol (col. 5, lines 33-67 and col. 6, lines 1-23, The stack

associated with adapter 210, in Figure 2, processes the communication from adapter 205) and to

return processed data to the first network interface (col. 5, lines 9-32, An enable indication is

sent back to the stack associated with adapter 205 from the stack of adapter 210.).

13.   As to claim 21, Stevens teaches the network interface team of claim 20, further

comprising: a first receiver, communicatively coupled to said first network interface, for

receiving network traffic to be transmitted by said first network interface (col. 3, lines 15-52,

Adapter 205); a second receiver, communicatively coupled to said second network interface, for

receiving, communicatively coupled to said second network interface, for receiving network

traffic to be transmitted by said second network interface (col. 3, lines 15-52, Adapter 210); and

a transferor, communicatively coupled with said first network interface and said second receiver,

and configured to transfer network traffic to said second network interface for processing

according to the protocol (col. 5, lines 33-67 and col. 6, lines 1-23).

14.   Claims 22-26 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent

Number 6,108,562 to Rydbeck et al..

15.   As to claim 22, Rydbeck teaches a method for sharing processing capabilities of members

of a system of network interfaces among the system members, comprising: determining a first

network interface is to transmit a first data (col. 3, lines 29-51); determining the first data is

configured in a manner unsupported the first network interface; locating a second network

interface of the system that supports a data configuration (col. 5, lines 55-67 and col. 6, lines 1-

31); secondarily processing by the second network interface of the first data in accordance with a

protocol into a second data (col. 5, lines 55-67 and col. 6, lines 1-31); and providing the second

data to the first network interface so that the second data appears to have been processed by the

first network interface (col. 4, lines 12-32).

16.   As to claim 23, Rydbeck teaches the method of claim 22, further comprising: selecting

the first network interface to transmit the first data based at least in part on a load-balancing of

network traffic across the plural network interfaces (col. 5, lines 31-43); performing by a driver

for the first network interface of said determining the first data is configured according to the

protocol unsupported by the first network interface (col. 5, lines 55-67 and col. 6, lines 1-31);

receiving by the driver the second data, wherein the data is now in a format supported by the

network interface; and providing the driver of the second data to the first network (col. 5, lines

55-67 and col. 6, lines 1-31).

17.   As to claim 24, Rydbeck teaches a method for distributing network processing across a

team of network interface cards including at least a first network interface card lacking support

for a first specialized capability and a second network interface card that supports the first

specialized capability (col. 4, lines 12-32), the method comprising: receiving first data to be

processed and transmitted by the first network interface card to a recipient (col. 3, lines 29-51);

determining a processing of the first data requires the first specialized capability unsupported by

the first network interface card secondarily processing by the second network interface card of

the first data into second data with the supported first specialized capability(col. 5, lines 55-67

and col. 6, lines 1-31); and providing the second data of the first network interface card for

transmission to the recipient (col. 5, lines 55-67 and col. 6, lines 1-31).

18.   As to claim 25, Rydbeck teaches the method of claim 24, wherein the second network

interface card comprises an application specific integrated circuit providing the first specialized

capability (col. 2, lines 58-67 and col. 3, lines 1-13).

19.   As to claim 26, Rydbeck teaches the method of claim 24, wherein the team of network

interfaces include a third that supports a second specialized capability, the method comprising:

aggregating specialized capabilities offered by interfaces of the team (col. 5, lines 55-67 and col.

6, lines 1-31); and providing a virtual network interface card appearing to providing each of the

specialized processing capabilities (col. 4, lines 50-67).

Claim Rejections - 35 USC § 103

20.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

21.   Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent

Number 6,324,583 to Stevens in view of U.S. Patent Number 6,438,678 to Cashman et al..

22.   As to claim 3, Stevens teaches the method of claim 1; however Stevens does not

explicitly teach encrypting the network data.

Cashman teaches a method wherein the protocol includes encrypting the first network data before submitting said first network data to a network (col. 7, lines 66-67 and col. 8, lines 1-17).

It would have been obvious to one of ordinary skill in the Computer Networking art at the time of the invention to combine the teachings of Stevens regarding a method for processing data with differing protocols with the teachings of Cashman regarding encrypting network data because such capabilities may be needed in for transmitting data in various network scenarios (col. 7, lines 48-65).

23.   As to claim 4, Stevens teaches the method of claim 1; however Stevens does not explicitly teach an encryption processor handling the network data.

Cashman teaches a method comprising communicatively coupling a hardware-based encryption processor with said second network interface, said encryption processor performing said processing of said first network data (col. 7, lines 66-67 and col. 8, lines 1-17).

For reasons stated in the rejection of claim 3 it would be obvious to combine the teachings of Stevens and Cashman.

24.   As to claim 5, Cashman teaches a method wherein the hardware-based encryption processor supports a primary mode for encrypting network traffic for a second network interface, and a secondary mode for encrypting network traffic for a first network interface (col. 8, lines 53-67 and col. 9, lines 1-3).

25.   Claims 6-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,324,583 to Stevens et al. in view of U.S. Patent Number 6,438,678 to Cashman et al. in further view of U.S. Patent Number 6,424,621 to Ramaswamy et al..

26.   As to claim 6, the Stevens-Cashman combination teaches a method wherein said second

network interface interleaves said primary mode encryption with said secondary mode

encryption (Cashman, col. 8, lines 53-67 and col. 9, lines 1-3), however; neither Cashman or

Kimber mention adaptive load balancing in there systems.

        Ramaswamy teaches a method wherein a first and second network interface operate in an

adaptive load-balancing mode (col. 6, lines 25-48, Figure 3 shows a system with two network

interfaces that performs load-balancing via the control processor.).

        It would have been obvious to one of ordinary skill in the Computer Networking art at the

time of the invention to combine the teachings of the Stevens-Cashman combination regarding a

method for processing data with differing protocols with encryption with the teachings of

Ramaswamy regarding load balancing because load balancing improves network performance

(Ramaswamy, col. 1, lines 66-67 and col. 2, lines 1-24).

27.   As to claim 7, Ramaswamy teaches the method comprising providing a third network

interface supporting the protocol; wherein processing said first network traffic into said second

network data is balanced across said second and third network interfaces (col. 6, lines 25-48,

Figure 3 also shows a third interface, in which the load balancing occurs.).

28.   As to claim 8, Ramaswamy teaches a method wherein said balancing is performed

according to a workload of said second and third network interfaces (col. 6, lines 25-48, Figure

3).

29.   Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent Number 6,324,583 to Stevens in view of U.S. Patent Number 6,438,678 to Cashman et al.

in further view of U.S. Patent Number 6,222,855 to Kimber et al..

30.   As to claim 9, the Stevens-Cashman combination does not explicitly teach fault tolerance.

Kimber teaches a method wherein the said first and second network interfaces operate in an adapter fault tolerance mode, and wherein said first network interface is a primary network interface, and said second network interface is a backup network interface (col. 4, lines 36-48).

It would have been obvious to one of ordinary skill in the Computer Networking art to combine the teachings of the Stevens-Cashman combination a method for processing data with differing protocols with the teachings of Kimber regarding fault tolerance because fault tolerant systems reduce the chance of impacts from failures (Kimber, col. 4, lines 36-48).

31.   As to claim 11, the Stevens-Cashman combination does not explicitly teach fault tolerance.

Kimber does not explicitly say that the first interface is a backup for the second interface. Kimber teaches a method wherein adapters operate in an adapter fault tolerance mode and the first and second adapters have backup network interfaces (Figure 3 shows a backup interfaces.).

It would have been obvious to one of ordinary skill in the Computer Networking art to combine the teachings of Kimber regarding a method for processing data with differing protocols with the teachings of Kimber regarding fault tolerant adapters because any of redundant interfaces could be used as a backup interface. It would have then been obvious to one of ordinary skill in the Computer Networking art to combine the teachings of the Stevens-Cashman combination a method for processing data with differing protocols with the teachings of Kimber regarding fault tolerance because fault tolerant systems reduce the chance of impacts from failures (Kimber, col. 4, lines 36-48).

32.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent

Number 6,324,583 to Stevens et al. in view of U.S. Patent Number 6,424,621 to Ramaswamy et

al..

33.   As to claim 10, Stevens teaches the method of claim 1; however Stevens does not

explicitly teach a load balancing system.

        Ramaswamy teaches a method wherein a first and second network interface operate in an

adaptive load balancing mode, and wherein said network interface interleaves processing

network traffic for said second network interface with processing first network traffic into said

second network interface (col. 6, lines 25-48, Figure 3).

        It would have been obvious to one of ordinary skill in the Computer Networking art at the

time of the invention to combine the teachings of Stevens regarding a method for processing data

with differing protocols with the teachings of Ramaswamy regarding load balancing because

load balancing improves network performance (Ramaswamy, col. 1, lines 66-67 and col. 2, lines

1-24).

34.   Claims 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent

Number 6,324,583 to Stevens in view of U.S. Patent Number 6,222,855 to Kimber et al..

35.   As to claim 12, it features similar limitations to claim 1, with the exception of the last

limitation that states that the second network data is transmitted with the second network

interface. Stevens does not teach a system in which a protocol conversion is done by a second

interface and then transferred by the second interface

        Kimber teaches a system in which a protocol conversion is done by a second interface

and then transferred by the second interface.

It would have been obvious to on of ordinary skill in the Computer Networking art to

combine the teachings of Stevens regarding a protocol conversion system with the teachings of

Kimber regarding the use of a second interface for transmission because transmitting directly

from the second interface increases communications efficiency (Kimber, col. 2, lines 11-48).

36.   Claims 13-15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent Number 6,324,583 to Stevens in view of U.S. Patent Number 6,222,855 to Kimber et al.

in further view of U.S. Patent Number 6,438,678 to Cashman et al..

37.   As to claims 13-15 and 19, the feature the same limitations as claims 3-5 and 9 and are

rejected for the same reasons as claims 3-5 and 9.

38.   Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent

Number 6,324,583 to Stevens in view of U.S. Patent Number 6,222,855 to Kimber et al. and

U.S. Patent Number 6,438,678 to Cashman et al. in further view of U.S. Patent Number

6,424,621 to Ramaswamy et al...

39.   As to claims 16-18, the feature the same limitations as claims 6-8 and are rejected for the

same reasons as claims 6-8.

Response to Arguments

40.   Applicant's arguments filed 7/15/2003 have been fully considered but they are not

persuasive. The applicant argues the following points: (a) A traversal from the first network

interface to the second network interface and back to the first network interface for transmission

by the fist network interface is not taught by Stevens; (b) The cited portion of Stevens at col. 6,

lines 24-63 does not teach interplay in that the cited potion only discusses using a single network

adapter; and (c) Stevens teaches interfacing two network stacks, and does not discuss presenting

network adapters as a homogenous team..

41.   As to point (a), each protocol stack is considered a separate network interface.

42.   As to point (b), the claims limitations themselves do not mention a network adapter.

Although the claims are read in light of the specification, limitations from the specification are

not read into the claims.

43.   As to point (c), there are no limitations which pertain to adapters therefore the term

network interface is interpreted broadly.

Conclusion

44.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

45.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Douglas B Blair whose telephone number is 703-305-5267. The

examiner can normally be reached on 8:30am-5pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Wiley can be reached on 703-308-5221. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-746-7239 for regular

communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703-305-3800.

Douglas Blair
October 2, 2003
DBB

DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100